

HOW TO... Compress video files

Want to send home videos to your loved ones, but finding they're too big to put on a disc? **Lynley Oram** explains how to pass on those precious memories using DivX

Video files tend to be large in size, making it difficult to send clips via email or to share home videos with friends and family on CD. However, digital videos can be squeezed down in size. For audio and video files, you need a specific type of compression software, called a codec. The word 'codec' is a contraction of compression and decompression.

In this walkthrough, we are using a codec called DivX. This is a video file codec that reduces files down in size while maintaining image quality. Using DivX, you get about an hour of video on one CD. It is also quite easy to use. Here we show you how it works.

1 Go to www.divx.com and click on the Free Download button. Save the file to your hard disk and make a note of the location. When the download is finished, find the DivX Installer icon and double-click on it, then follow the onscreen instructions. Keep an eye on the screens as you click through them. The screen after the Licence Agreement asks which components you'd like to install. If you just want to install the codec then only tick this option. Remove a tick from the box next to an option by clicking on it. If you're happy with your current media player, there's no need to install and use the DivX player. However, the DivX codec on its own won't encode your files. You'll also need

a converter, and you may already have one. A converter is included with commercial video-editing programs such as Pinnacle Studio, Ulead Video Studio and Adobe Premiere. You also get one with the free VirtualDub program. We'll show you how to encode video files with Pinnacle, VirtualDub and the DivX converter.

You may be asked if you want to install a browser toolbar. We were offered the Yahoo! toolbar. Click No if you don't want one; it isn't necessary for the codec or the converter.

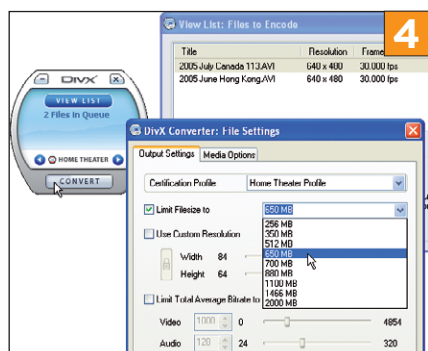
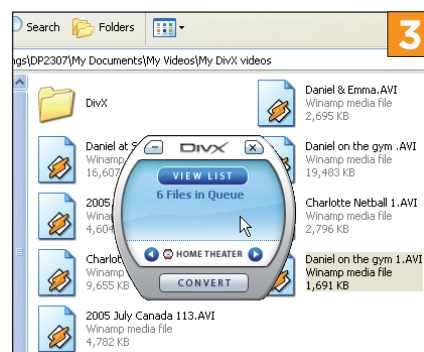
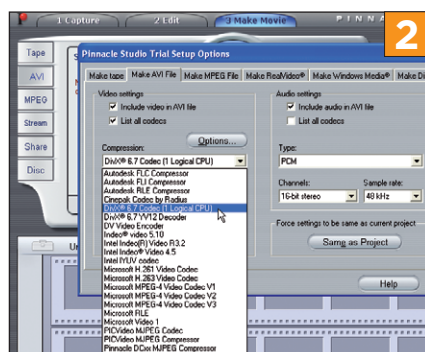
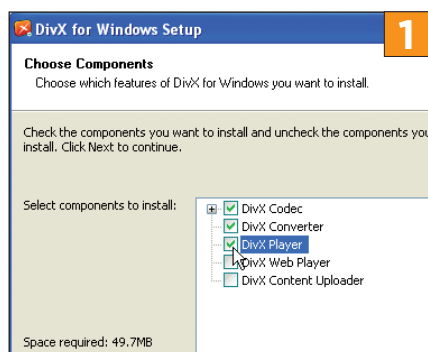
2 Once the DivX codec is installed, you're ready to start compressing video files. With commercial video-editing programs you'll need to configure the program to work with DivX. In Pinnacle Studio 9 (a free 30-day trial version is available from www.click-now.net/download/Pinnacle_Studio.htm), go to the Make Movie tab and click on the AVI tab, then on the Settings button. Tick the 'List all codecs' option, then select DivX from the Compression drop-down menu. Then when you click on the Create AVI file button in the Make Movie screen, Pinnacle Studio will use the DivX codec to encode the file.

3 Assuming you want to use the DivX converter and it has been installed (see Step 1), you'll find a shortcut icon for the

program on your Windows desktop. Double-click on it. The DivX converter looks like the face of a digital watch. At the bottom of the screen is a Convert button. Just above this are left and right pointing arrows. Use these buttons to format your video file for a particular use, such as viewing on a mobile phone screen. We've left it on the default option of Home Theater. Open the folder containing the video you want to encode, using My Computer or Windows Explorer. Click on the relevant video file, drag it over the DivX converter window and drop it. The converter immediately starts processing the file. You can encode a number of files in one session. To do this, continue dragging and dropping the additional videos into the converter.

One limitation of the DivX converter is that it doesn't handle MPEG2 files. For these, you need the optional DivX Converter MPEG2/DVD plugin, which costs an extra \$10 (around £5) from www.divx.com.

4 To get an idea of just how much smaller the file will be once it is converted, click on the View List button. Select a file then click on Modify. At the bottom of the File Settings box, you'll see the Estimated File Size. You can make a few changes to the file at this stage. A handy feature is the Limit Filesize option. If the videos you're converting are going on to a CD, for



example, you can select 650MB, the amount of space on a CD. For more options, such as specifying the final video's resolution, click on the Advanced button. When you've finished, click OK and then click the Convert button.

5 The conversion process may take a few minutes, depending on how many files you include. A dialog box will notify you when the conversion is complete. Click on the View Files button. This will open the folder containing your chosen video files, which are now in DivX format. Our largest video file was 16MB in AVI format. Converting to DivX reduced this to 9MB.

6 The DivX converter has a useful feature to combine several files into one file with its own menu. To do this, drag and drop the videos into the converter. Click on the View List button and tick the 'Combine videos into a single DivX file' option. Then click Convert. The file will take the name of the first video, and if that is the same name as a file already in your DivX movies folder it will add a number to the filename. You can rename the video later. When the combined file is played, it will open with a list of the videos included in the file. The viewer can then choose the video they want to watch.

7 If you need a video editor but you don't want to pay for a commercial package, try the basic, but free, VirtualDub. This program will encode files in DivX as well. Download VirtualDub from <http://virtualdub.sourceforge.net>. Save the Zip file to your hard disk and then create a folder for the program. Extract all the files from the Zip file into this folder. Once this is done, you just need to double-click on the VirtualDub.exe file to start the program.

8 VirtualDub has a limited number of features for editing source video. If all you want to do is clip out a few bits of video to send to friends and family, for example, this free

program will do the job. Let's say you have a video file where you want to chop out chunks of unwanted footage. Open the video file. Move the slider at the bottom of the screen until you reach the start of the portion of the video you want to remove. From the Edit menu, click on Set Selection Start. Next, move the slider to the end of the unwanted portion and, this time, click on Set Selection End. The selected portion will be highlighted in blue on the slider bar. Select Cut from the Edit menu. Now move the slider from just before the cut was made, to see how it looks. If you're not happy with the result, select Undo from the Edit menu.

9 Once you've finished editing your video, you can compress it. Make sure that Full Processing Mode is selected in the Video menu. Next, click on Compression in the Video menu. Select the DivX codec from the menu and click on Configure. The DivX Codec Properties dialog box will now be open. Here you can make changes to the way the encoder handles your files. For now, just click on the Restore Defaults button at the bottom of the dialog box. Click OK and then click OK again.

10 From the File menu, select Save as AVI. The VirtualDub status window will appear. You can follow the conversion progress in this window, and it will give you a rough estimate of how long the conversion process will take.

While you're waiting, you can carry on working on your PC. If you're not worried about how long the process will take, click on the menu next to Processing Thread Priority. Scroll up the menu and select Lowest. This means that VirtualDub will take longer to convert the file, but it will allow Windows to free up your computer's processor so that it can spend more time working on other tasks. The video preview behind the status window will move as VirtualDub makes its way through the frames.

11 The default Rate Control setting is 1st Pass. This is perfect for situations where you want a quick conversion, but it doesn't give you the best possible video quality. Go back to the DivX Codec Properties dialog box (Video, Compression, Configure). On the Main tab, click in the Rate Control box near the bottom. Select Multipass, 1st Pass. In this mode, VirtualDub will create a log file before it generates video output. The log file contains an analysis of the video. Use the Save as AVI command. You won't need a different name for each pass, so just pick a suitable name for the video. To speed up the process, turn off Audio Processing until the last pass. Go to the Audio menu and select No Audio.

12 When it has finished, open the DivX Codec Properties dialog box again. This time, select Multipass, Nth Pass. When you save a video in this mode, VirtualDub uses the analysis from the first log to improve the video encoding but without increasing the bit rate, so the size of the file isn't increased. Click OK to close the Properties dialog box, then OK again to close the Video Compression box. Select Save as AVI and click Save, then Yes when asked if you want to overwrite the existing file. Follow the same process again to ensure the highest possible quality. Although each pass improves video quality, there is a limit to how much the program can do with the encoding. Two passes will get you the optimal quality level for your video.

Before you get to your final pass, remember to switch the audio back on. Go to Audio and select Source Audio. VirtualDub works best with interleaved audio, where the audio track is interleaved within the file so that each piece of audio data falls closely alongside the relevant video data. Check that this is enabled by selecting Audio, Interleaving. Make sure there is a tick next to Enable audio/video interleaving.

When you save the encoded video, you will see a substantial drop in video size compared to the unencoded original AVI file. **CS**

